4.2.2.3 Air Quality and Noise

Construction and operation activities associated with the No Action Alternative and the proposed storage alternatives would generate criteria and toxic/hazardous pollutants. To evaluate the air quality impacts at NTS, criteria and toxic/hazardous concentrations from the No Action Alternative and the proposed storage alternatives are compared with Federal and State standards and guidelines. Impacts from radiological airborne emissions are described in Section 4.2.2.9.

In general, all of the proposed storage facilities would emit the same types of air pollutants during construction. It is expected emissions would not exceed Federal, State, or local air quality regulations. PM_{10} concentrations will be increased especially during peak construction periods.

The principal sources of emissions during construction include the following:

- Fugitive dust from land clearing, site preparation, excavation, and wind erosion of exposed ground surfaces
- Exhaust and road dust generated by construction equipment, vehicles delivering construction materials, and vehicles carrying construction workers

During operation, impacts from each of the individual storage facilities with respect to the concentrations of criteria and toxic/hazardous air pollutants are predicted to be in compliance with Federal, State, and local air quality regulations or guidelines. Table 4.2.2.3–1 presents the estimated pollutant concentrations for each of the storage alternatives, indicating little difference between alternatives with respect to impacts to air quality.

Emission rates attributed to operation of the proposed storage facilities are presented in Tables F.1.3–2 and F.1.3–3. [Text deleted.] Air pollutant emission sources associated with operations include the following:

- Operation of boilers for space heating
- Operation of diesel generators and periodic testing of emergency diesel generators
- Exhaust and road dust generated by vehicles delivering supplies and bringing employees to work
- Toxic/hazardous pollutant emissions from facility processes

Noise impacts during either construction or operation are expected to be low. Air quality and noise impacts for each storage alternative are described separately. Supporting data for the air quality and noise analyses are presented in Appendix F.

AIR QUALITY

An analysis was conducted of the potential air quality impacts of emissions from each of the storage alternatives as described in Section 4.1.3.

Section 176 (c) of the 1990 CAA Amendments requires that all Federal actions conform with the applicable SIP. EPA has implemented rules that establish the criteria and procedures governing the determination of conformity for all Federal actions in nonattainment and maintenance areas. These are discussed in Section 4.1.3. The attainment status of the area in which NTS is located is discussed in Section 3.3.3. Since the area is considered to be an attainment area for the criteria pollutants, the proposed actions at this site do not require that a conformity analysis be performed.

Preferred Alternative: No Action Alternative

This alternative utilizes estimated air emissions data from operations at NTS assuming continuation of site missions as described in Section 3.3. The emission rates for the criteria and toxic/hazardous pollutants for No Action are presented in Table F.1.2.3-1. Table 4.2.2.3–1 presents the No Action concentrations for the total site. Concentrations of all criteria and toxic/hazardous air pollutants at the site boundary are expected to remain within applicable Federal, State, and local ambient air quality standards.

Consolidation Alternative

Modify Existing Tunnel Drifts and Construct New Material Handling Building at the P-Tunnel

In addition to the sources of emissions during construction associated with the No Action Alternative, fugitive dust resulting from the operation of a concrete batch plant may be an additional emission source associated with a new facility.

Increases in PM_{10} concentrations may occur during the peak construction period for a new facility and during dry and windy conditions. Appropriate control measures would be followed to minimize pollutant concentrations during construction. Concentrations of all pollutants at the site boundary would remain within applicable Federal and State ambient air quality standards during construction.

During operation of the modified P-Tunnel, impacts with respect to the concentrations of criteria and toxic/hazardous air pollutants are predicted to be in compliance with Federal, State, and local air quality regulations or guidelines. Estimated pollutant concentrations attributable to increased operations associated with this storage alternative, plus the No Action concentrations, are presented in Table 4.2.2.3–1.

Construct New Plutonium Storage Facility

The new storage facility option would have air quality impacts similar to those of the modified P-Tunnel, with the following exceptions. During operation, emissions would be slightly lower, as shown in Appendix F. Impacts for the new storage facility option with respect to the concentrations of criteria pollutants are predicted to be in compliance with Federal, State, and local air quality regulations or guidelines. Estimated pollutant concentrations attributable to increased operations associated with this option for the storage alternative, plus the No Action concentrations, are presented in Table 4.2.2.3–1.

Collocation Alternative

Modify Existing Tunnel Drifts and Construct New Material Handling Building at the P-Tunnel

The P-Tunnel option would have slightly higher emissions than for the consolidation of Pu modified P-Tunnel, as shown in Appendix F. Impacts for this alternative are also expected to be in compliance with Federal, State, and local air quality regulations and guidelines. Estimated pollutant concentrations attributable to increased operations associated with this option for the storage alternative, plus the No Action concentrations, are presented in Table 4.2.2.3–1.

Construct New Plutonium and Highly Enriched Uranium Storage Facilities

The new storage facility option would be located in the same area as the consolidation of Pu new storage facility and would have similar air quality impacts with the following exceptions.

During operation, emissions would be slightly higher than for consolidation of Pu new storage facility option, as shown in Appendix F. Impacts for the new storage facilities option with respect to the concentrations of criteria and toxic/hazardous air pollutants are predicted to be in compliance with Federal, State, and local air quality regulations or guidelines. Estimated pollutant concentrations attributable to increased operations associated with this option for the storage alternative, plus the No Action concentrations, are presented in Table 4.2.2.3–1.

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

Air quality impacts for construction and operations for this subalternative are expected to be similar to those previously described for the Consolidation Alternative and the Collocation Alternative. [Text deleted.]

NOISE

The location of the storage facilities relative to the site boundary and sensitive receptors was examined to evaluate the potential for onsite and offsite noise impacts. Noise sources during construction may include heavy construction equipment and increased traffic. Increased traffic would occur onsite and along offsite local and regional transportation routes used to bring construction material and workers to the site.

Preferred Alternative: No Action Alternative

Nontraffic noise sources associated with continued interim storage and other ongoing missions would be the same as described in Chapter 3. The continuation of operations at NTS would result in no appreciable change in traffic noise and onsite operational noise sources from current levels. Nontraffic noise sources are located at sufficient distance from offsite areas that the contribution to offsite noise levels would continue to be small. Due to the size of the site, noise emissions from construction equipment and operations activities would not be expected to cause annoyance to the public. Some noise sources may be located close enough to onsite noise sensitive areas to result in impacts, such as disturbance of wildlife.

Consolidation and Collocation Alternatives

Nontraffic, operational noise sources associated with the storage alternatives include existing or additional equipment and machines (cooling systems, vents, motors, and material handling equipment). These noise sources would be located at sufficient distance from offsite areas that the contribution to offsite noise levels would be small. Due to the size of the site, noise emissions from construction equipment and operations activities would not be expected to cause annoyance to the public. Some noise sources may result in impacts, such as disturbance of wildlife.

Subalternative Not Including Strategic Reserve and Weapons Research and Development Materials

Noise impacts for construction and operations for this option are expected to be almost the same as those previously described for the Consolidation Alternative and the Collocation Alternative because noise impacts are based on the use of the facility and not the size. [Text deleted.]